For immediate release

UDCK Town Management
Mitsui Fudosan Co., Ltd.
CREW SYSTEMS, INC.
Neural Pocket Inc.

Installation of 29 AI Cameras around the Kashiwa-no-ha Campus Station Area in Japan's Largest Project
Introducing AI Cameras in Kashiwa-no-ha Smart City
## Safe and Secure Town Management for Residents Starts with Real-Time Image Analysis

Tokyo, Japan, September 21, 2021 - Mitsui Fudosan Co., Ltd., a leading global real estate company headquartered in Tokyo, and UDCK Town Management will install 29 Edge AI cameras ("AI cameras") in the Kashiwa-no-ha Campus Station area, and begin new area management activities to provide safe, secure, and comfortable lifestyles for residents. The AI cameras will be provided by CREW SYSTEMS, INC., and will utilize AI-based video analysis technology from Neural Pocket Inc. for image analysis.

Kashiwa-no-ha Smart City, which promotes community development through a public-private-academia partnership, continues to develop, with its population exceeding 10,000 at the end of 2020. As the population and scale of the town expands, issues, such as crowding in front of the station, and requests from residents for crime prevention and surveillance are increasing.

This initiative will involve installing AI cameras in public, outdoor spaces, and real-time AI-based image analysis will be used to survey the flow of people and detect irregular behavior and area entry of passersby. Utilizing the data obtained from the analysis will contribute to safe, secure, and comfortable lifestyles in Kashiwa-no-ha Smart City. The initiative in this area will be the largest project in Japan.

Key Points of this Release
- New functions of area management, from analyzing real-time and diverse images using AI cameras to actions based on analytical results, will be implemented.
- Plan to survey the flow of people and detect irregular behavior (such as people collapsing, crouching, or carrying a weapon) and area entry with the AI cameras.
- Images captured by AI cameras are immediately analyzed by the AI built into the camera and discarded. The analytic data is then converted into a format in which individual persons cannot be identified. We will not obtain or preserve any data that may violate individual privacy.
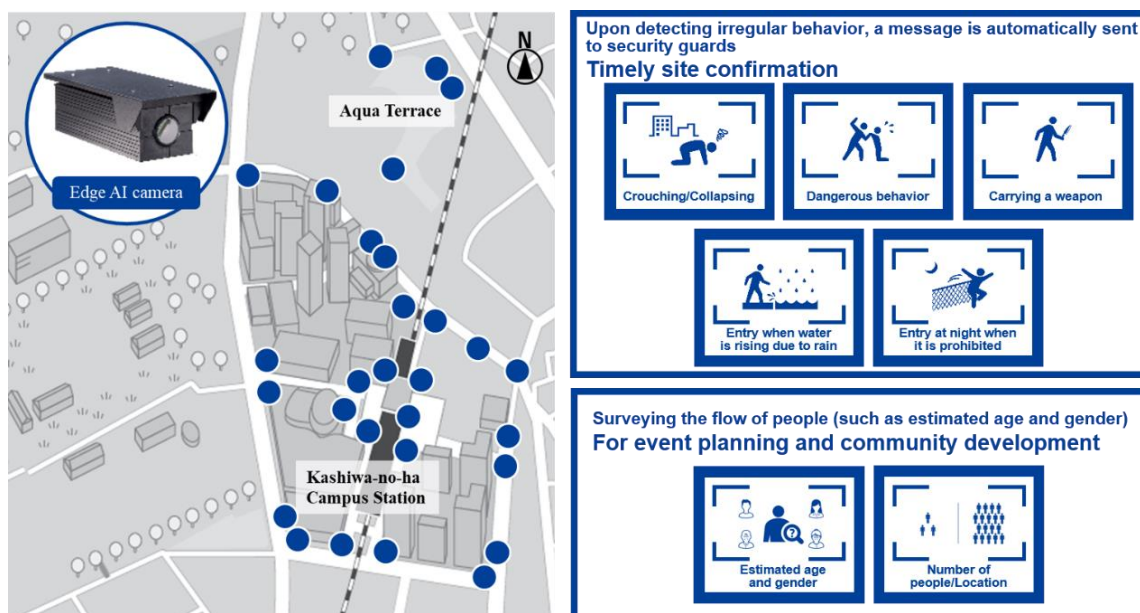
【About AI Cameras】

In this trial, we will install 25 AI cameras provided by CREW SYSTEM in the Kashiwa-no-ha Campus Station area and 4 cameras at Aqua Terrace, which is a regulation reservoir. Furthermore, we will employ Edge AI cameras, which are capable of independent footage analysis and data conversion. Footage recorded by the AI cameras is converted to data in real time so that individual persons cannot be identified, meaning we will not obtain or preserve any data that may violate individual privacy. Additionally, in this trial, when an incident is detected using AI analysis, a text message including information about the camera's location and incident detected will be sent. Image data from the footage will not be forwarded.

AI Camera Analysis Details

・ Detecting irregular behavior (such as people collapsing or crouching) and area entry
  Physical object recognition and behavior recognition are combined to achieve highly accurate AI-based
  detection, which is possible regardless of the direction of the incident, such as people collapsing or crouching.

・ Weapon detection
We uniquely utilize CG simulations and achieve highly advanced AI detection even during nighttime by using physical object recognition learned from a wide array of data.

Examples: Detection of a person collapsing or crouching in an image (Images provided by Neural Pocket)

Note: There is no guarantee that the incident detection functions of the AI built into the camera will detect the target incident 100% of the time.

・ Surveying the flow of people
  Cameras will determine age and gender and count the number of people.

【Details of the Initiative】

- Detecting entry into the Aqua Terrace area (Operation starting from September 2021)

AI cameras will detect entry into the Aqua Terrace (a regulation reservoir) when water is rising due to rain, and at night when it is prohibited, etc.

When entry is detected, a message is automatically sent to security guards who manage the area around Kashiwa-no-ha Campus Station, and this will reduce the time spent on site confirmation and strengthen accident prevention activities.


Entry when water is rising due to rain

Entry at night when it is prohibited

· Surveying the flow of people (Operation starting from September 2021)

We will survey the flow of people in the Kashiwa-no-ha Campus Station and Aqua Terrace areas, and utilize the data for event planning and community development.

Furthermore, we are considering sharing area data obtained by the AI cameras, including data regarding the flow of people, with users via Dot to Dot, a platform that enables data sharing across business types and industries. By sharing area data with universities, research institutions, and business operators, we can expect research or the creation of new services that contribute to community development.

* Relevant press release: https://www.mitsuifudosan.co.jp/corporate/news/2020/1126_02/ (Japanese)

Estimated age and gender

Number of people/Location
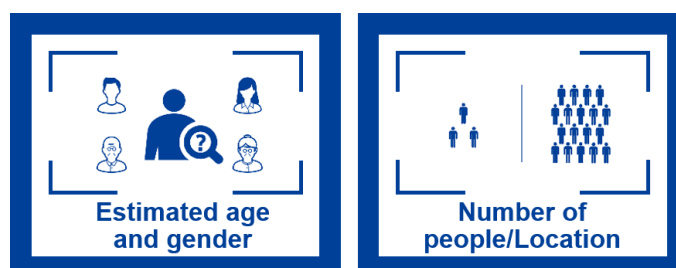
· Detection of irregular behavior in Kashiwa-no-ha Campus Station area (Planning to start operation from April 2022)

AI cameras will detect irregular behavior of passersby (such as collapsing or crouching) and weapons in the Kashiwa-no-ha Campus Station West and East Exit areas.

When irregular behavior or a weapon is detected, a message is automatically sent to security guards who manage the area around Kashiwa-no-ha Campus Station. We believe this will reduce the time spent on site confirmation and strengthen accident prevention activities.

We will be trialing detection of irregular behavior from September 2021 to March 2022. There will only be deliberate trial detection during daytime on weekdays during this period, so security guards will not arrive.

Crouching/Collapsing   Dangerous behavior   Carrying a weapon

【Reference Information】
UDCK Town Management homepage: Guidelines on this initiative
　　https://www.udcktm.or.jp/ai/index.html　(Japanese)

■ Mitsui Fudosan Group's Contribution to SDGs https://www.mitsuifudosan.co.jp/english/corporate/esg_csr/

The Mitsui Fudosan Group aims for a society that enriches both people and the planet under the principles of coexistence in harmony with society, link diverse values and achieve a sustainable society, and advances business with an awareness of the environment (E), society (S) and governance (G), thus promoting ESG management. By further accelerating its ESG management, the Group will realize Society 5.0, which the Japanese government has been advocating, and contribute significantly to achieving the SDGs.

* The initiatives covered in this press release are contributing to three of the UN's SDGs.

Goal 9 　Industry, Innovation and Infrastructure
Goal 11 Sustaibale Cities and Communites
Goal 17 Partnerships for the Goals